

1 **WHAT IS CLAIMED IS:**

2 1. A pin lamination method that may eliminate pits and dents formed
3 in a multi-layer printed wiring board, comprising the steps of:

4 (a) preparing a plurality of steel plates and coppers in a clean
5 working room, and a plurality of prepgs and cores in a working room;
6 (b) serially laminating a first one of the coppers having a shiny
7 surface facing upward, one of the steel plates, and a second one of the coppers
8 having a shiny surface facing downward on a ply-up device, thereby forming a
9 sandwiched lamination board, with the steel plate sandwiched between the first
10 and second coppers, wherein the shiny surface of each of the first and second
11 coppers is directed toward the steel plate; and

12 (c) conveying the sandwiched lamination board to the working room,
13 and laminating the sandwiched lamination board, the prepgs, and the cores
14 serially, thereby forming a multi-layer board.

15 2. The pin lamination method that may eliminate pits and dents
16 formed in a multi-layer printed wiring board in accordance with claim 1,
17 wherein in the step (a), each of the steel plates, the coppers, the prepgs, and
18 the cores are pre-fabricated with multiple pin holes.

19 3. The pin lamination method that may eliminate pits and dents
20 formed in a multi-layer printed wiring board in accordance with claim 2,
21 wherein in the step (b), the ply-up device is provided with multiple pins, and
22 the pin holes of the coppers and the steel plate align with the pins of the ply-up
23 device, thereby facilitating insertion of the pins of the ply-up device.

1 4. The pin lamination method that may eliminate pits and dents
2 formed in a multi-layer printed wiring board in accordance with claim 1,
3 wherein in the step (c), the sandwiched lamination board, the preprints, and the
4 cores are mounted between two mold plates provided in the working room.

5 5. The pin lamination method that may eliminate pits and dents
6 formed in a multi-layer printed wiring board in accordance with claim 4,
7 wherein each of the two mold plates is provided with multiple pins, and pin
8 holes of the sandwiched lamination board, the preprints, and the cores align
9 with the pins of the mold plates, thereby facilitating insertion of the pins of the
10 mold plates.

11 6. A ply-up device for performing the pin lamination method that
12 may eliminate pits and dents formed in a multi-layer printed wiring board in
13 accordance with claim 1, wherein the ply-up device includes a work table, a lift
14 rod, an inclined board, a base steel plate, and a ply-up plate, wherein:

15 the lift rod has a first end pivoted on a first side of the work table, and
16 a second end pivoted with a first end of the inclined board which has a second
17 end pivoted on a second side of the work table, the lift rod may be lifted and
18 lowered for adjusting the inclined angle of the inclined board;

19 the base steel plate is secured on the inclined board; and
20 the ply-up plate is secured on the base steel plate.

21 7. The ply-up device in accordance with claim 6, wherein the base
22 steel plate includes multiple L-shaped fixing blocks secured on the inclined
23 board, and is provided with multiple pin holes for insertion of multiple pins.

1 8. The ply-up device in accordance with claim 7, wherein the ply-up
2 plate includes multiple pads secured on the fixing blocks, and is provided with
3 multiple pin holes for insertion of the multiple pins.

4 9. The ply-up device in accordance with claim 6, wherein the ply-up
5 plate has a periphery formed with multiple openings for insertion of holders.

6